

Practice Questions

1. The four main classes of materials are:, and
2. The two broad categories of properties of materials are and
3. The properties of engineering materials are dependent to a large extent on
4. A special arrangement of atoms extending throughout the entire material is refer to as
5. A special arrangement of atoms extending only to the atoms nearest neighbours is called
6. Short-range is common in some ceramics and water, whereas, Long-range order is common in and
7. is a collection of points which are arranged in a periodic pattern so that the surroundings of each point in the lattice are identical.
8. is a sub-division of the lattice that still retains the overall characteristics of the entire lattice.
9. There are bravais lattices grouped into crystal structures.
10. Three examples of metals with FCC structure are, and
11. Two examples of metals with hexagonal structure HCP are and
The Seven Crystal Systems are.....,,,....., and
12. is used to refer to a specific planes and direction within a crystal lattice.
13. The number of atoms per unit cell of FCC, BCC and HCP are, and
14. A material in which its properties depend on the crystallographic direction along which it is measured is said to be
15. Isotropic means
16. The two steps in the solidification of a metal or alloy are and
17. The two main mechanisms by which nucleation of solid particles in liquid metal occur are and
18. The three basic types of lattice imperfections are, and
19. Three of the conditions for alloy system to exhibit complete solid solubility are, and
20. The factors that affect the conductivity of metals include, and
21. The applications of semi-conductors include, and
22. The optical property means